

REMARKS

The present Amendment is in response to the Office Action having a mailing date of August 27, 2003. Claims 1-21 and 23-24 are pending in the present Application. Applicant has amended claims 1, 2, 4, 5, 11, 12, 14, 15, 23, and 24. Consequently, claims 1-21 and 23-24 remain pending in the present Application.

Applicant has amended claims 1, 2, 4, 11, 12, 14, 15, 23, and 24 to indicate that it is determined whether performance is “improvable” as opposed to “can be” improved. Applicant has also amended claims 1, 2, 4, 5, 11, 12, 14, 15, 23, and 24 to remove the term “it”. For the reasons discussed previously, Applicant respectfully submits that these amendments do not narrow the scope of claims 1, 2, 4, 5, 11, 12, 14, 15, 23, and 25. Applicant has amended claims 1 and 11 to recite that step (c) and the transmission subsystem, respectively, determine that the performance of the automatic transmission is improvable when a particular load on the automatic transmission system increases by a particular amount within a particular time. Support for the amendment can be found in the specification, page 7, lines 1-3. Accordingly, Applicant respectfully submits that no new matter is added.

In the above-identified Office Action, the Examiner indicated that claims 1-21 and 23-24 were rejected under 35 U.S.C. § 112, second paragraph. In particular, the Examiner found the term “it” to be indefinite.

Applicant has also amended claims 1, 2, 4, 5, 11, 12, 14, 15, 23, and 24 to remove the term “it”. Instead, the claims recite that a particular step or a portion of the system determines whether performance is improvable. Consequently, Applicant respectfully submits that claims 1-21 and 23-24 are clear and definite. Accordingly, Applicant respectfully submits that the Examiner’s rejection of claims 1-21 and 23-24 under 35 U.S.C. § 112, second paragraph is moot.

Furthermore, Applicant notes that the Examiner's only rejection of claims 2, 4, and 14 appear to be under 35 U.S.C. § 112, second paragraph. Accordingly, Applicant respectfully submits that claims 2, 4, and 14 are allowable as currently presented.

In the above-identified Office Action, the Examiner rejected claims 1, 11, 12, 15, 16, 19, 20, 21, 23, and 24 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,009,374 (Urahashi). The Examiner also rejected claims 3, 5-10, and 13 under 35 U.S.C. § 103 as being unpatentable over Urahashi in view of U.S. Patent No. 6,098,005 (Tsukamoto).

In the above-identified Office Action, the Examiner rejected claims 1, 11, 12, 15, 16, 19, 20, 21, 23, and 24 under 35 U.S.C. § 102 as being anticipated by Urahashi.

Applicant respectfully traverses the Examiner's rejection of claims 1, 11, 15, 16, 19, and 20. Applicant also respectfully disagrees with the Examiner's rejection of claims 12, 23, and 24.

With respect to claims 1 and 11, claim 1 recites a method for controlling an automatic transmission. The method of claim 1 includes the steps of obtaining positioning data using a global positioning satellite (GPS), monitoring the automatic transmission to obtain transmission data and learning whether performance of the automatic transmission is improvable utilizing the positioning data and the transmission data. Claim 1 further recites that the step of learning whether the performance is improvable includes determining "that the performance of the automatic transmission is improvable when a particular load on the automatic transmission system increases by a particular amount within a particular time . . ." Claim 1 further recites that a shift threshold for the automatic transmission is adjusted if step (c) (the learning step) determines that the performance of the automatic transmission is improvable and if the positioning data can be obtained using the GPS, and setting the shift threshold to a preset shift

threshold if the positioning data cannot be obtained using the GPS. Claim 11 recites an analogous system claim.

Thus, the method and system recited in claims 1 and 11 determine, based at least in part on GPS data, whether performance of the automatic transmission is improvable. Furthermore, one specific criterion used to determine whether the performance can be improved is whether a load on the automatic transmission system increases by a certain amount within a certain amount of time. Thus, the performance of the system is improved and shifting may be smoother, gas mileage improved, and wear and tear on the automatic transmission reduced. Specification, page 7, lines 10-13.

The cited portions of Urahashi, in contrast, fail to teach or suggest a method or system for controlling an automatic transmission that uses a change in a load in a particular time in order to determine whether performance can be improved and controlling the automatic transmission based upon this determination. Urahashi does describe a performance improvement that is based on upcoming altitude changes or curves that are indicated by GPS data. Urahashi, cols. 10 and 11. In the case of upcoming curves, Urahashi describes providing an alarm to the driver. Urahashi, col. 10, lines 10-13. In the case of an altitude change corresponding to an uphill or downhill slope, Urahashi determines the altitude change and the current gear setting. Urahashi, col. 10, lines 33-35 and 41-42. If the current gear is deemed unsuitable, then the system of Urahashi changes the gear to one that is appropriate to the slope, or grade, being traversed. Urahashi, col. 10, lines 42-47. However, Applicant has found no mention in the cited portions of Urahashi of determining the suitability of a gear, or whether the performance of the automatic transmission could be improved, based upon a *change in a load* on the automatic transmission. Further, the cited portions of Urahashi are devoid of mention of determining whether the performance could be improved based

upon whether the change in the load occurs for a particular time. Consequently, Urahashi fails to teach or suggest the method and system recited in claims 1 and 11. Accordingly, Applicant respectfully submits that claims 1 and 11 are allowable over the cited references.

Moreover, Applicant notes that independent claims 1 and 11 do not recite that a step “can be” performed. Claims 1 and 11 previously recited that it is learned and determined whether performance can be improved. Claims 1 and 11 currently recite that it is learned whether and determined whether the performance is improvable. Applicant respectfully submits that the meaning of the terms in claims 1 and 11 have not changed. In addition, claims 1 and 11 continue to recite steps that are performed, not steps that can be performed. Consequently, Applicant respectfully submits that claims 1 and 11 are allowable over the cited references.

Claims 15, 16, 19, 20, and 21 depend upon independent claim 11. Consequently, the arguments herein apply with full force to claims 15, 16, 19, 20, and 21. Accordingly, Applicant respectfully submits that claims 15, 16, 19, 20, and 21 are allowable over the cited references.

Applicant also respectfully disagrees with the Examiner’s rejection of claim 12 as being anticipated by Urahashi. Claim 12 recites a system for controlling an automatic transmission that includes a global positioning satellite (GPS) subsystem and a transmission subsystem coupled to the GPS subsystem. The GPS subsystem is for obtaining positioning data using a GPS satellite. The transmission subsystem is for monitoring the automatic transmission to obtain transmission data, for learning whether performance of the automatic transmission is improvable utilizing the positioning data and the transmission data and for adjusting a shift threshold for the automatic transmission for the positioning data the transmission subsystem determines that the performance of the automatic transmission is improvable. Claim 12 also recites that the transmission

subsystem further determines whether a one-time event has occurred and ensures that the automatic transmission is at a factory setting if the one-time event has occurred.

Thus, the system in claim 12 not only adjusts the shift threshold for improved performance, but is also capable of accounting for one-time events. For example, the system recited in claim 12 might account for unusually light or heavy loads, a trailer being towed, or strong head or tail winds that may adversely affect performance of the vehicle. Specification, page 8, lines 5-11. Thus, even upon the occurrence of a one-time event, the system in claim 12 can improve the performance of the automatic transmission.

In contrast, the cited portion of Urahashi fails to teach or suggest a system, which accounts for one-time effects. The cited portions of Urahashi are also devoid of mention of the desirability of possibility of one-time effects, such as winds, loads, or trailers being towed, being accounted for in any manner. Thus, Urahashi fails to teach or suggest the system recited in claim 12.

Moreover, as discussed above with respect to claims 1 and 11, independent claim 12 does not recite that a step “can be” performed. Claim 12 previously recited that it is learned and determined whether performance can be improved. Claim 12 currently recites that it is learned whether and determined whether the performance is improvable. Applicant respectfully submits that the meaning of the terms in claim 12 has not changed and claim 12 continues to recite steps that are performed, not steps that can be performed. Consequently, Applicant respectfully submits that claim 12 is allowable over the cited references.

Applicant also respectfully disagrees with the Examiner’s rejection of claims 23-24. Claim 23 recites a method for controlling an automatic transmission. The method recited in claim 23 includes the steps of obtaining positioning data using a global positioning satellite (GPS), monitoring the automatic transmission to obtain transmission data, and learning whether

performance of the automatic transmission is improvable utilizing the positioning data and the transmission data. Claim 23 further recites that the performance of the automatic transmission is improved by a shift threshold adjustment if the automatic transmission performs an unnecessary shift. Claim 23 further recites that an unnecessary shift is “a shift that occurs for less than or equal to a particular amount of time . . .” Claim 23 also recites that the shift threshold is adjusted for the automatic transmission for the positioning data if the learning step (step (c)) determines that the performance of the automatic transmission is improvable. Claim 24 recites an analogous system.

Thus, claims 23 and 24 recite a method and system, respectively, which determine that the performance is improvable is an unnecessary shift has occurred. In claims 23-24, an unnecessary shift is defined as a shift that occurs for less than or equal to a particular amount of time. Thus, unnecessary shifts may be reduced or avoided, thereby improving performance.

In contrast, Applicant can find no mention the cited portions of Urahashi of determining whether there is an unnecessary shift. Moreover, the cited portions of Urahashi do not indicate that the performance of an unnecessary shift, as defined as a shift for less than a particular period of time, might be used to improve performance. Consequently, Urahashi does not teach or suggest the method and system recited in claims 23 and 24. Accordingly, Applicant respectfully submits that claims 23-24 are allowable over the cited references.

In the above-identified Office Action, the Examiner also rejected claims 3, 5-10, and 13 under 35 U.S.C. § 103 as being unpatentable over Urahashi in view of Tsukamoto.

Claims 3 and 5-10 depend upon independent claim 1. Similarly, claim 13 depends upon independent claim 11. Consequently, the arguments herein apply with full force to claims 3, 5-10, and 13. In particular, Urahashi fails to teach or suggest a method or system for controlling an

automatic transmission that uses a change in a load in a particular time in order to determine whether performance can be improved and controlling the automatic transmission based upon this determination.

Tsukamoto fails to remedy the defects of Urahashi. Tsukamoto describes a system which also controls the transmission of a vehicle based upon the vehicles surroundings, such as upcoming intersections. Tsukamoto, Abstract. However, Applicant has found no mention in the cited portion of Tsukamoto of determining that the performance of the automatic transmission is improvable when a particular load on the automatic transmission system increases by a particular amount within a particular time. The cited portions of Tsukamoto thus also fail to mention adjusting a shift threshold based upon such a determination. Consequently, Tsukamoto fails to remedy the defects of Urahashi. Stated differently, if the teachings of Tsukamoto were combined with those of Urahashi, the combination might use the vehicle surroundings, such as upcoming intersections, in addition to the grade or slope to determine whether and how to adjust the gears. However, because both Tsukamoto and Urahashi fail to teach or suggest determining that the performance of the automatic transmission is improvable when a particular load on the automatic transmission system increases by a particular amount within a particular time, the combination would also fail to teach or suggest this feature. Because Urahashi in view of Tsukamoto fail to teach or suggest determining that the performance of the automatic transmission is improvable when a particular load on the automatic transmission system increases by a particular amount within a particular time, Urahashi in view of Tsukamoto fails to teach or suggest the methods and system recited in claims 3, 5-10 and 13. Accordingly, Applicant respectfully submits that claims 3, 5-10, and 13 are allowable over the cited references.

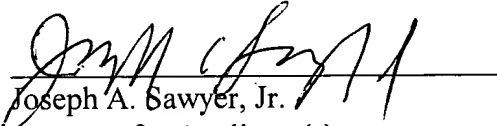
Accordingly, for the above-mentioned reasons, Applicant respectfully submits that the claims are allowable over the cited reference. Consequently, Applicant respectfully requests reconsideration and allowance of the claims as currently presented.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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